ACCESSION NR: AP4020309 S/0139/64/000/001/0147/0152

AUTHORS: Nesterov, V. M.; Nesmelova, Ye. S.; Ol'shanskaya, N. I.; Mikhaylova, T. G.

TITLE: Action of gamma-radiation on dielectric properties of some cable materials

SOURCE: IVUZ. Fizika, no. 1, 1964, 147-152

TOPIC TAGS: gamma irradiation, rubber product, resin, dielectric loss tangent, dielectric constant, electrical conductivity, natural rubber, nairit

ABSTRACT: Gamma-irradiation effects on a group of rubber products and resins have been investigated. The studies included dielectric loss tangent, dielectric constant, and electrical conductivity of these materials under Co^{60} γ - irradiation. The largest dose rate was 10 r/sec and the total dosage, 10^5-10^6r. Measurements showed that gamma irradiation has practically no effect on natural rubber, nairit, and resins, TSSh-35 and ShN-40. The dielectric loss tangent in TSSh-35 was small, and electrical conductivity showed large variations only below CC. In silicon rubber and silicon resins a reversible increase in electrical conductivity was noticed which led to an increase in the loss tangent of the silicon rubber. A reversible loss tangent was also noticed in SKT-30 rubber. Orig. art. has: 9 figures and 1 formula.

Card 1/2

ACCESSION NR: AR4042158

By measurement of the resonator; the change C of the slot was determined and, consequently, ϵ of the sensor. By change of the Q-factor tan δ was determined. Measurement of ϵ and tan δ at f $3 \cdot 10^9$ and 10^{10} cps was carried out by the waveguide method. In order to avoid the effect of radiation on the equipment and observer, the measuring line was connected with the section of the waveguide containing the sensor, through the waveguide or cable connection, passing through the shield. These connections have a configuration such as to exclude passage through them of γ-rays. When in the connection there is significant damping, the accuracy of measurements of ϵ and tan δ sharply drops. One illustration. Bibliography: 9 references.

SUB CODE: EC, NP ENCL: 00

Card 2/2

S/0196/64/000/005/B008/B009

ACCESSION NR: AR4042158

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 5B42

AUTHOR: Nesterov, V. M.; Zamotrinskaya, Ye. A.

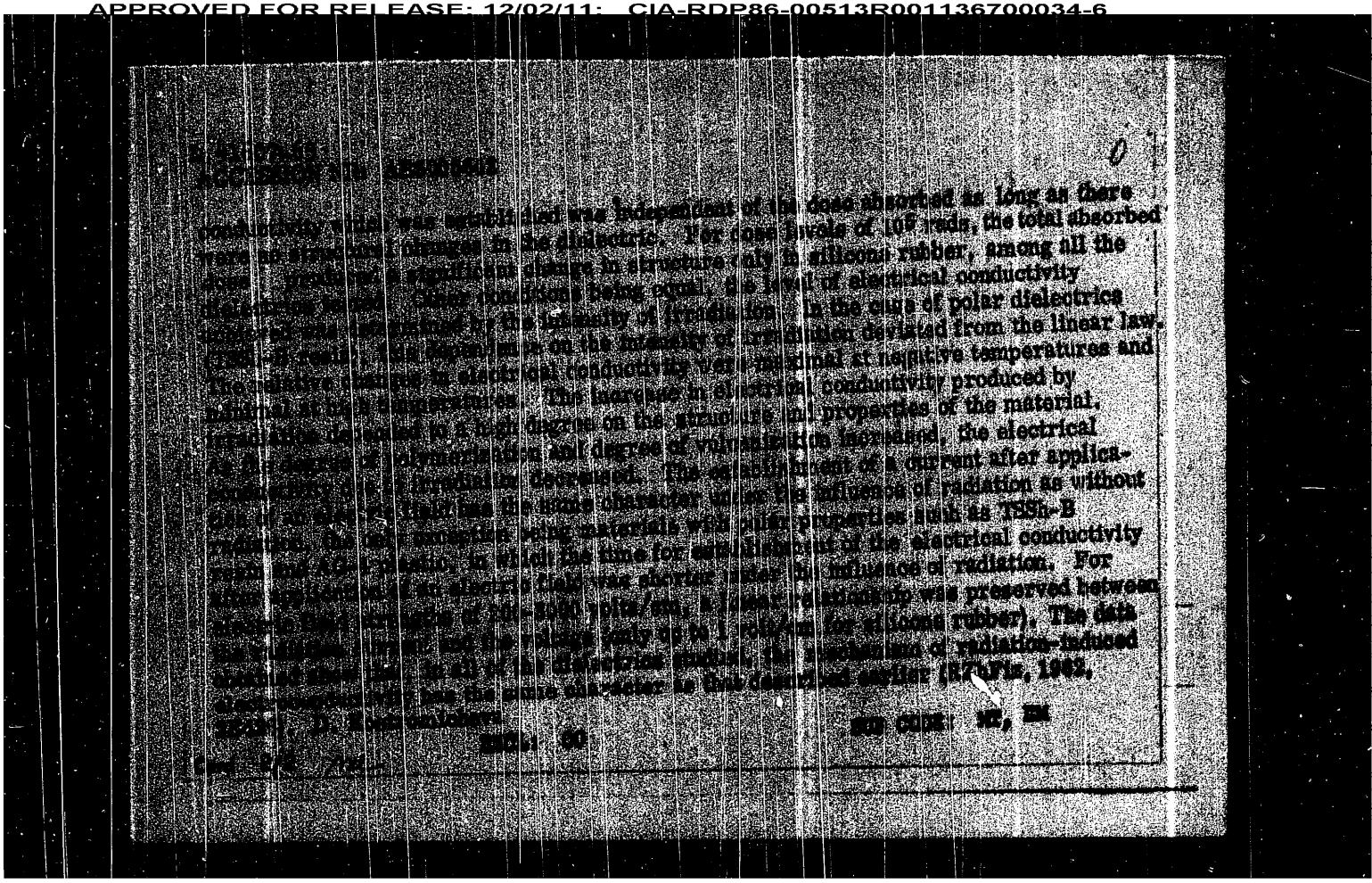
TITLE: Measurement of electrical parameters of insulating materials at the moment of Gamma irradiation

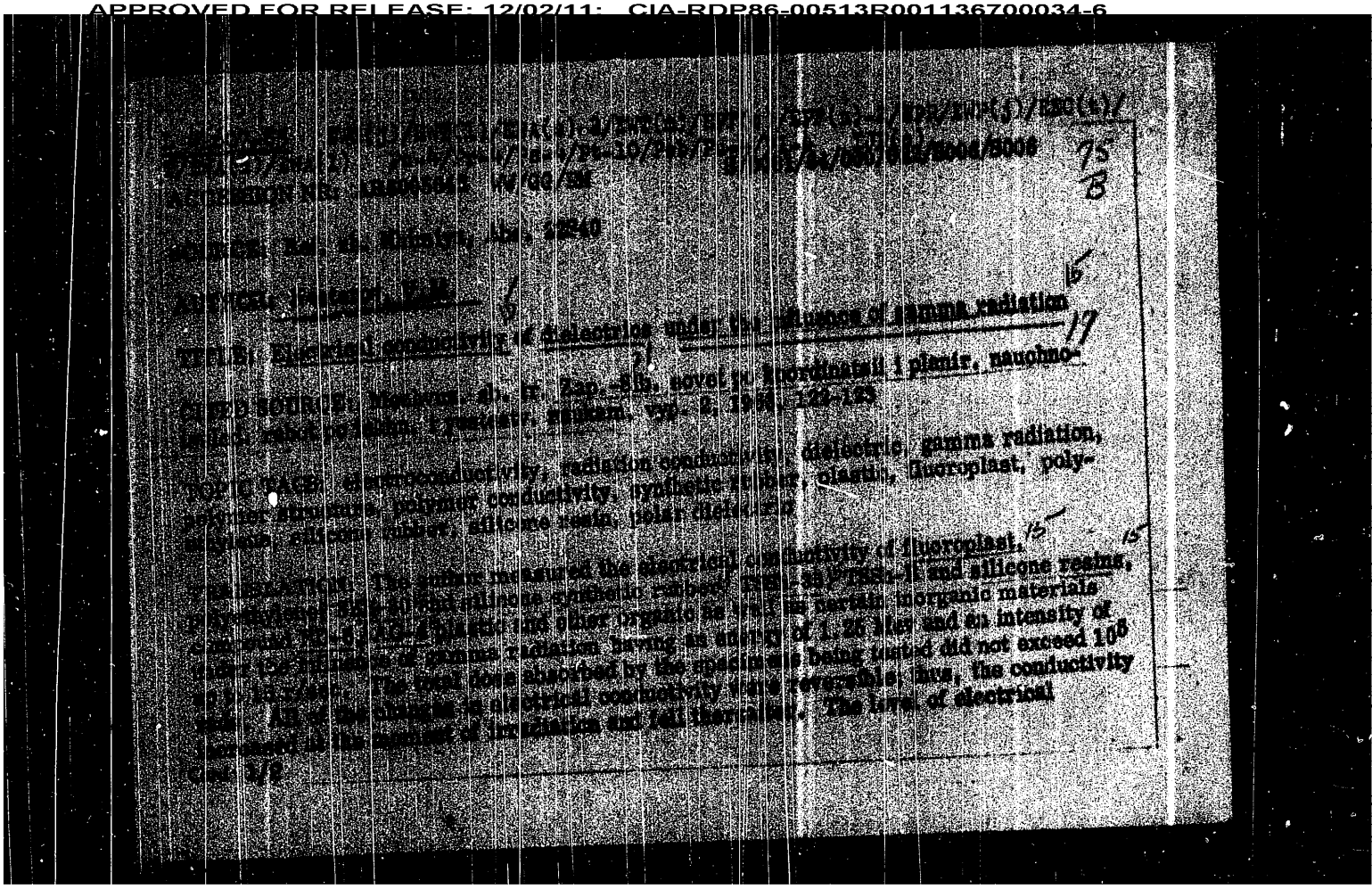
CITED SOURCE: Mezhvuz. sb. tr. Zap.-Sib. sovet po koordinatsii i planir. nauchno-issled. rabot po tekhn. i yestestv. naukam, vy*p. 2, 1963, 127-129

TOPIC TAGS: electric parameter, insulating material, Gamma irradiation, resonator, sensor, waveguide

TRANSLATION: Irradiation leads to errors of measurement, since ionized air shunts the specimen. In order to avoid this, a special vacuum chamber was designed. Measurement of specific conductivity in a vacuum with help of a d-c amplifier of the "Cactus" type under irradiation is safe for the observer. Measurement of ϵ and $\tan\delta$ at 10 cps was carried out by the resonator method. For that, a toroidal resonator was used into whose slot the sensor under investigation was introduced.

Card 1/2





ACCESSION NR: AR4042159

the condition that tanδ without irradiation has low values. For transducers whose losses are determined by the presence of polar groups, there occur changes in tanδ connected with variation of parameters of relaxation oscillators. Bibliography: 7 references.

SUB CODE: EC, NP ENCL: 00

Card 2/2

ACCESSION NR: AR4042159 S/0196/64/000/005/B011/B011

SOURCE: Ref. zh. Elektrotekhnika i energetika, Abs. 5B55

AUTHOR: Nesterov, V. M.

TITLE: Character of variation of parameters of electric insulating materials under the influence of gamma-irradiation

CITED SOURCE: Mezhvuz. sb. tr. Zap.-Sib. sovet po koordinatsii i planir. nauchno-issled. rabot po tekhn. i yestestv. naukam, vy*p. 2, 1963, 124-126

TOPIC TAGS: parameter, electric insulating material, Gamma irradiation, electric conductivity, transducer

TRANSLATION: Investigations of the frequency dependency of change of tanδ indicate that the radiation effect shows up in the region of $f<10^6$-10^{10} cps. Thus, the conclusion can be drawn that irradiation leads to a strong increase in electrical conductivity in substances with friable structure and small quantity of electron traps. In these materials it is possible to increase tanδ from conductivity under

Card 1/2

ACCESSION NR: AR4034485

under the action of 1.25-MeV γ rays with dose intensity up to 15 roentgen/sec (with an over-all absorbed-radiation dose up to 10^5 rad). No permanent changes in σ were observed. The changes have a reversible character, for the value of σ increases during the course of irradiation and decreases after the cessation of the irradiation, the decrease time exceeding the growth time. It is established that the irradiation electric conductivity (RE) depends essentially on the structure and properties of the material, and the relative changes of σ are largest at below-zero temperatures and smallest at high temperatures. The dependence of the radiation current on the electric field intensity in specimens turns out to be linear up to fields 2×10^2--3×10^3 V/cm. It is assumed that the obtained data offer evidence in favor of the RE mechanism published in an earlier paper (RZhFiz, 1962, 2E426), and that the nature of the RE has an electronic character. A. Zhdan.

DATE ACQ: 10Apr64 SUB CODE: PH, MA ENCL: 00

Card 2/2

ACCESSION NR: AR4034485 S/0058/64/000/003/E077/E077

SOURCE: Ref. zh. Fiz., Abs. 3E612

AUTHOR: Nesterov, V. M.

TITLE: Electric conductivity of dielectrics under the influence of Gamma radiation

CITED SOURCE: Mezhvuz. sb. tr. Zap.-Sib. sovet po koordinatsii i planir. nauchno-issled. rabot po tekhn. i yestestv. naukam, vy*p. 2, 1963, 122-123

TOPIC TAGS: dielectric, electric conductivity, Gamma ray exposure, teflon, polyethylene, latex, rubber, plastic quartz, radiation electric conductivity

TRANSLATION: The electric conductivity (σ) of several compounds was measured (teflon, polyethylene, latex, rubber, plastic, quartz, etc.)

Card 1/2

S/139/62/000/005/003/015
E194/E335

AUTHORS: Vorozhtsov, B.I., Nesterov, V.M. and Ol'shanskaya, N.I.

TITLE: The dielectric properties of gamma-irradiated insulating materials 2. Polyethylene

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 5, 1962, 34 - 37

TEXT: At the instant of irradiation tan δ and the conductivity of the polyethylene were found to increase, particularly when the material was irradiated at a low temperature. In the case of irradiation at 70 °C the electric strength diminished as the radiation dose was increased but within the dosage range of 0 - 10^6 rads the conductivity was independent of the dose and tan δ was independent of the dose in the range 0 - 3 x 10^5 rads. Moreover, the increase in tan δ was not great at high frequency and as polyethylene is used as a high-frequency dielectric it may, for practical purposes, be considered gamma-radiation stable and may be recommended for use in equipment operating in gamma-radiation zones of up to 3 000 rads/min. There are 2 figures and 2 tables.

Card 1/2

VOROZHTSOV, B.T.; MESTEROV, V.M.; ZAVOYSKAYA, Ye.A.; PILATOV, I.S.

Dielectric properties of insulating materials following gamma irradiation. Part 1. Methods for measuring the dielectric characteristics during irradiation. Izv.vys.uch.zav.; fiz. no.4:163-170 '62. (MIRA 15:9)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva.
(Dielectrics, Effect of radiation on) (Gamma rays)

irreversibly, particularly at high temperatures and low frequencies (at a frequency of 30 c/s and T = 200 °C the change was 30%). In the temperature and frequency range in which relaxation losses occur in plastic AG-4, reversible changes are observed in the nature of the frequency function of tan δ, presumably due to displacement of the maximum of tan δ towards lower frequencies because of the extended range of relaxation time whilst subject to radiation.
There are 5 figures.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V. Kuybysheva
(Siberian Physicotechnical Institute at Tomsk State University imeni V.V. Kuybyshev)

SUBMITTED: December 18, 1961

S/139/62/000/006/021/032
E194/E155

AUTHORS: Vorozhtsov, B.I., Potakhova, G.I., and Nesterov, V.M.

TITLE: Dielectric properties of insulating materials during gamma radiation. III. Plastic АГ-4 (AG-4)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no.6, 1962, 143-146

TEXT: Until recently, plastic grade AG-4, which is based on phenol-formaldehyde, was considered one of the few heat-resistant moulded materials suitable for casings for capacitors, transformers, relays etc. operating at temperatures of +200 °C. It is becoming increasingly necessary to test such electrical and radio materials environmentally. The present work describes the study of the permittivity, tan δ, breakdown stress and resistivity of plastic grade AG-4 under gamma radiation from Co^{60}, at a dosage rate of 670 rads/min with total dosages up to 10^5 rads, at various temperatures between -60 and +200 °C, in the frequency range 30 - 10^5 c/s. The permittivity changed less than 10%. A dosage of 2000 rads/min and a total dose of up to 4×10^5 rads/min had no effect on the electric strength at 50 c/s. The tan δ changed

Card 1/2

VOROZHTSOV, B.I.; NESTEROV, V.M.; OL'SHANSKAYA, N.I.

Dielectric properties of insulating materials subjected to gamma radiation. Part 2. Polyethylene. Izv. vys. ucheb. zav.; fiz. no.5:34-37 '62. (MIRA 15:12)

1. Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosudarstvennom universitete imeni V.V. Kuybysheva.
(Dielectrics, Effect of radiation on)
(Polyethylene)

Reversible electrical effects ...

(TSSh-35) and TCW-E (TSSh-B) rubber tan δ decreased during the irradiation. In polar dielectrics the maximum frequency dependence of tan δ shifted toward lower frequencies when the γ-irradiation was switched on (e.g. in PVC plastics, polyisobutylene, fluoroplastics-3, polyamide-68). In some of these ε decreased by ~20% (PVC) when the γ-irradiation was turned on. These effects are mainly due to a Compton effect of the Co^{60} γ-quanta ($h\nu \cong 1.25$ Mev). Using these doses the original state was re-established itself in any case when the irradiation was stopped, but the reversibility cannot be attributed to radiation stability of the material. There are 11 figures and 5 tables.

ASSOCIATION: Tomskiy gosudarstvennyy universitet (Tomsk State University)

SUBMITTED: April 23, 1962

A3107

S/181/62/004/011/002/049
B102/B104

AUTHORS: Nesterov, V. M., Nesmelova, Ye. S., Ol'shanskaya, N. I., Mikhaylova, T. G., and Potakhova, G. I.

TITLE: Reversible electrical effects produced by radiation in dielectrics

PERIODICAL: Fizika tverdogo tela, v. 4, no. 11, 1962, 3010 - 3017

TEXT: The authors investigated the behavior of the electrical parameters ε, $\tan\delta$, and σ of various rubber types, fluoroplastics, polyethylene, polychlorvinyl, quartz single crystals and ЭД-6(ED-6) compound before, during and after γ-irradiation under various temperature conditions. With doses of 10^5 - 10^6 rad the maximum irradiation intensity was 10-15 r/sec. Up to doses of 10^6 rad, the parameters changed reversibly at the moment when irradiation began. The following effects were observed: σ jumped up to a definite height when irradiation started and dropped down to the starting value when it was switched off. $\tan\delta$ increased in most of the objects studied. In some samples (polyethylene, polychlorvinyl, ТСШ -35

Card 1/2

S/139/61/000/006/018/023
E194/E484

The influence of gamma ...

may also change because the hydrogen and the chlorine ions formed during irradiation may neutralize ions of admixtures. It is claimed that these conclusions are confirmed by the experimental results. There are 6 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The two references to English language publications read as follows: Ref.1: D.E.Harmer. Nucleonics v.10, 1959, 72. Ref.3: Klein Mannal. Communic. and Electronics no.2, 1956.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V.Kuybysheva
(The Siberian Physicotechnical Institute of Tomsk University imeni V.V.Kuybyshev)

SUBMITTED: September 30, 1960

34197
S/139/61/000/006/018/023
E194/E484

15.8050

AUTHORS: Nesterov, V.M., Toporova, V.N.

TITLE: The influence of gamma irradiation on the dielectric properties of vinyplast

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika. no.6, 1961, 141-144

TEXT: Vinyplast is based on orientated films of polyvinyl chloride which is a substance that undergoes marked changes in properties after gamma irradiation. Irradiation causes the evolution of gaseous HCl and there are changes in the mechanical, optical and electrical properties. As relatively little work has been done on the changes in electrical properties, the present authors studied the influence of a radiation dose of up to 10^7 rad at a rate of 50000 rad/hour on the permittivity ε, tan δ and resistivity σ of vinyplast in the frequency range of 20 to 10^{10} c/s and the temperature range 20 to 120°C. After irradiation the tan δ of vinyplast at frequencies of 3×10^9 and 10^{10} c/s diminishes, particularly at the higher temperatures. However, at frequencies of 10^6 to 10^7 c/s there is no difference

Card 1/3

The influence of betatron radiation.. S/196/62/000/023/004/006
E194/E155

for the non-irradiated material. Irradiation of varnishes K-47, 976-1, and M-16 (MGM-16) under various conditions caused no change in their electrical insulating properties. Irradiation of steatite ceramic (1% BaO, 91.6% Onot talc, 5.2% kaolin, 3.2% boracite) (with a dosage of 2×10^9 rads) did not alter the shape of the temperature curve of tan δ (measured at 10^7 c/s) either in weak fields (945 V/cm) or in strong (1890 V/cm). With a dosage of 2.12×10^7 rads, tan δ measured at 945 V/cm was not altered at low temperatures but increased appreciably at temperatures above 400 °C.
13 illustrations. 31 references.

[Abstractor's note: Complete translation.]

Card 3/3

15 MeV betatron. The characteristics of polyethylene were not altered by a radiation dose of 10^5 rads (the measurements were made at about 10^9 c/s). The low-frequency tan δ of plastic [illegible] increased (particularly after irradiation under tropical conditions and at -60 °C) but the value in the frequency range 10^3 - 10^5 c/s did not alter. Evidently irradiation increases the resistive component of loss by conductivity and does not alter the relaxation components. Similar results were obtained for plastics K-114-55, K-211-3 and ФКПМ-25 (FKPM-25). In the case of textolite with a silicoorganic binder СКМ-1 (SKM-1), a dosage rate of 500 rads/min first increases the low-frequency tan δ only up to about 10^2 rads, and then diminishes it. Above 1200 rads/min the tan δ steadily decreases. It is possible that with heavy dosages and high dosage rates a process of binding together reduces the tan δ. In the silicoorganic resins 14Р-2 (14R-2), 14R-6 and 14R-15, dosage rates of 500 rads/min and a dosage of 10^5 rads cause a small increase in conductivity and tan δ at low frequency, but this change disappears as temperature curves are being taken, so that the shape of the reverse temperature curve coincides with that

43537

S/196/62/000/023/004/006
E194/E155

AUTHORS: Vodop'yanov, K.A., Vorozhtsov, B.I., Potakhova, G.I., Lavrov, M.D., Nesmelova, Ye.S., Nesterov, V.M., Vorozhtsova, I.G., Ol'shanskaya, N.I., Zimina, Ye.A., Mikhaylova, T.G., Sitozhevskaya, G.V., and Filatov, I.S.

TITLE: The influence of betatron radiation on the dielectric properties of certain electrical insulating materials

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.23, 1962, 12-13, abstract 23 B 67. (In collection: Elektron. uskoriteli (Electronic Accelerators), Tomsk, Tomskiy un-t, 1961, 308-318)

TEXT: The temperature and frequency characteristics of electrical insulating materials were investigated before and after γ-irradiation at dosages ranging from 10^4 to 2×10^5 rads with a dosage rate ranging from 300 to 1300 rads/minute at temperatures of -60, -20 and +60 °C and under tropical conditions (40 °C and relative humidity of 98%); the source of radiation was a

Card 1/3

NESTEROV, V. M., (SFTI)

"Measurement by means of the wave guide method the conductivity, the dielectric permeability, and the losses of the "fluoroplast", polyethylene, "vinyloplast" etc. at from -80 - 100°C and 10^6, 10^7, 5.10^8 and 3.10^9 cycles"

Report presented at a Conference on Solid Dielectrics and Semiconductors, Tomsk Polytechnical Inst., 3-8 Feb. 58.
(Elektrichestvo, '58, No. 7, 83-86)

SOV/[illegible]

Measurement of Temperature Dependence of Dielectric Permittivity and Angle of Dielectric Loss in a [illegible] cm Layer

ture, the increase in ε is not more than 2 or 3% over the whole temperature range, whereas that for $\tan\delta$ is in most cases around 30 or 40%. In particular, for the polyethylenes and their derivatives the rise in $\tan\delta$ is particularly sharp above about 60°C. The paper contains 1 table, 3 figures and 4 references of which 2 are Soviet, 1 English, 1 German. The work was first reported at the Tomsk Conference of Higher Education Establishments on Dielectrics and Semiconductors, February, 1953.

ASSOCIATION: Sibirskiy fiziko tekhnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuybysheva (Siberian Physico-Technical Institute of Tomsk University imeni V.V.Kuybyshev)

SUBMITTED: April 7, 1958.

Card 3/3

Measurement of Temperature Dependence of Dielectric [illegible]
and Angle of Dielectric Loss in a 3 cm Layer

sample to emit the same wavelength. A further alternative is to employ a two-condenser arrangement in which the [illegible] induced by the sample under investigation is compared with that induced by a similar sample of a substance whose dielectric properties are accurately known over the temperature range in question. Here again either a null method or direct measurement of the wavelength may be employed. The difference method is particularly applicable to liquids, where the effect of the container has to be substracted out anyway. The experimental arrangement is essentially that described by other authors (Dakins and Works - Ref.1; also Burdun, Ref.2). The samples used were all 3 cm thick and were enclosed in a thermostatically controlled heating/cooling unit. Signal generator type 431 and wavemeter type 441 were employed. Results are presented for a number of organic compounds (polystyrol, polyethylenes, etc.) and industrial dielectrics derived from them, the range of temperatures covered extending from -100°C to +160°C. Both dielectric permittivity (ε) and the tangent of the loss angle ($\tan \delta$) are plotted on the same graphs (a dubious economy which hinders their ready interpretation).

Card 2/3 While both ε and $\tan \delta$ are found to [illegible]

SOV/139-59-5-5/35

AUTHOR: Nesterov, V. M.

TITLE: Measurement of Temperature Dependence of Dielectric Permittivity and Angle of Dielectric Loss in a 3 cm Layer (Izmereniye temperaturnoy zavisimosti dielektricheskoy pronitsayemosti i ugla dielektricheskikh poter' v diapazone 3 cm)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 5, pp 117-120 (USSR)

ABSTRACT: The principle of the method is to insert a sample of the dielectric under investigation between the plates of a condenser in an oscillator circuit and to observe the associated change in the characteristic wavelength emitted. Standard resonant circuit theory can then be used to relate the change in capacity to the change in wavelength and hence, knowing all the other constants of the circuit the dielectric permittivity and angle of dielectric loss can be deduced. In practice, it is often found more convenient to employ a null method whereby the circuit is re-tuned, after the insertion of the

Card 1/3

NESTEROV, V.M.; LEYZGOL'D, Ya.A.

Acylation of 2-aminothiazole. Med.prom. 14 no.4:37-38 Ap '60.
(MIRA 13:6)

1. Anzhero-Sudzhenskiy khimiko-farmatsevticheskiy zavod.
(THIAZOLE)

NESTEROV, V.M.

New rollers for the track measuring car. Put' i put.khoz. 5 no.6:25 Je '61. (MIRA 14:8)

1. Starshiy dorozhnyy master, st. Ural'sk, Kazakhskoy dorogi. (Railroads--Equipment and supplies)

NESTEROV, V.I., inzh.

Automatic part feed to a press. Mekh.i avtom.proizv. 18 no.3:19
Mr '64. (MIRA 17:4)

α the slit angle, and Z the size of the (diametral) interspace. According to the above formula a 10% enlargement of the slit compared to the nominal value can be attained under retention of the quality necessary for the details of electro-vacuum appliances. The above formula is completely adequate for calculating interspaces in materials of small thickness (in dependence of the actual conditions of the material and its physical properties). For metals 0.01 to 0.05 mm thick application of a "raw" matrix (not heat treated) or of a "raw" punch (piercing) is adviseable. For the determination of stress on the punch a most convenient nomograph was used, which had been proposed by scientists from Eastern Germany. This nomograph is suitable for constructors, technologists, foremen, and also for qualified workers. There are 1 figure, 2 tables, and 1 reference.

18(1),18(6)

AUTHOR: Nesterov, V. I., Engineer SOV/113-59-9-7/19

TITLE: The Investigation of the Parameters of Punching

PERIODICAL: Priborostroyeniye, 1959, Nr 9, pp 17-18 (USSR)

ABSTRACT: Nonferrous metals and alloys were mainly used for the investigation. The experimental technique consisted in calculating the interspaces from existing experimental and theoretical data. Then expedient interspaces, complying with the heightened demands of the electro-vacuum industry, were chosen. The magnitude of the slit angle was chosen as main characteristic property of the expedient interspace. Results of the experiments were carefully interpreted, grouped, examined in practical respect under the conditions of series production, and represented in a table of slit angles. After analysing the results obtained, and investigating the functional dependence of the components, the author proposes the following formula for the calculation of the diametral interspaces: $Z = S \frac{ctg\alpha}{A}$, where S denotes the thickness of the material, A a coefficient related to this thickness,

Card 1/2

Investigation of the Operation of a Rotary Furnace With Heat Exchangers SOV/[illegible]-58-12-3/[illegible]

furnace lining before and behind the heat exchanger should be constructed with refractories of high impact- and friction resistance. There are 3 figures and [illegible] tables.

ASSOCIATION: Institut ogneuporov, g. Satka (Institute of Refractories, Town of Satka) Zavod "Magnezit" ("Magnezit" Plant)

Card 3/3

rich in chamotte (Fig 3). The furnace operation was investigated under different burning conditions (Table 1). The operation of this furnace was compared with that of another furnace without heat exchanger (Table 2). It was found that both furnaces differ much in their operation. The quantities of dust separation during the experiments are given in the tables 3 and 4. The characteristics of the magnesite and the temperature within the furnace provided with heat exchangers are given in table 5. Conclusions: The specific fuel consumption is decreased by from 15 up to 19% by the installation of internal heat exchangers; the furnace output is 17% lower than that of a furnace without heat exchanger. The use of heat exchangers of the Ditts system is, due to the considerable dust separation, unsuited for burning magnesite. The length of the ceramic heat exchanger must be reduced down to 15 m and can be built completely with stones rich in chamotte, since the gases do not exceed a temperature of 1300° in this zone. Heat-resisting steel should be used for the manufacture of the metallic heat exchangers. The

15(2)

AUTHORS: Vasilevskiy, P. A., Monterov, V. I., SOV/131-[illegible]-12-4/[illegible]
Kuznetsov, Yu. L.

TITLE: Investigation of the Operation of a Rotary Furnace With Heat Exchangers (Issledovaniye raboty vrashchayushchikhsya pechy s vnutrennimi teploobmennymi ustroystvami)

PERIODICAL: Ogneupory, 1958, Nr 12, pp 539 - 544(USSR)

ABSTRACT: A furnace provided with internal heat exchangers of the Ditts system was investigated at the "Magnezit" plant. The furnace had a length of 90 m and a diameter of 3.5 m. A conical part was fixed to the cold furnace end, and a segment diaphragm was fixed to the gate. The number of rotations of the furnace was 0.59 - 1.18 per minute, when the main drive was switched on, and [illegible] per hour, when the accessory drive was switched on. Figure 1 shows that a metallic and ceramic heat exchanger were installed in the furnace. The metallic equipment consists of 20 sections and has a length of 16 m and a weight of 30 tons approximately (Fig 2). The ceramic equipment has a total length of 19 m and consists of aluminous shapes, which are also

Card 1/3

NESTEROV, V.I.

MIKHAYLOV, P.A.; NESTEROV, V.I.; DAGELAYSKIY, B.V., redaktor.

[Repairing mechanisms that measure electricity] Remont elektroizmeritel'nykh priborov. Pod.red. B.V.Dagelaiskogo. Moskva, Gos. energ. izd-vo, 1953. 223 p. (MLRA 7:5)
(Electric meters)

NESTEROV, V.G.; STEPANOV, P.A.

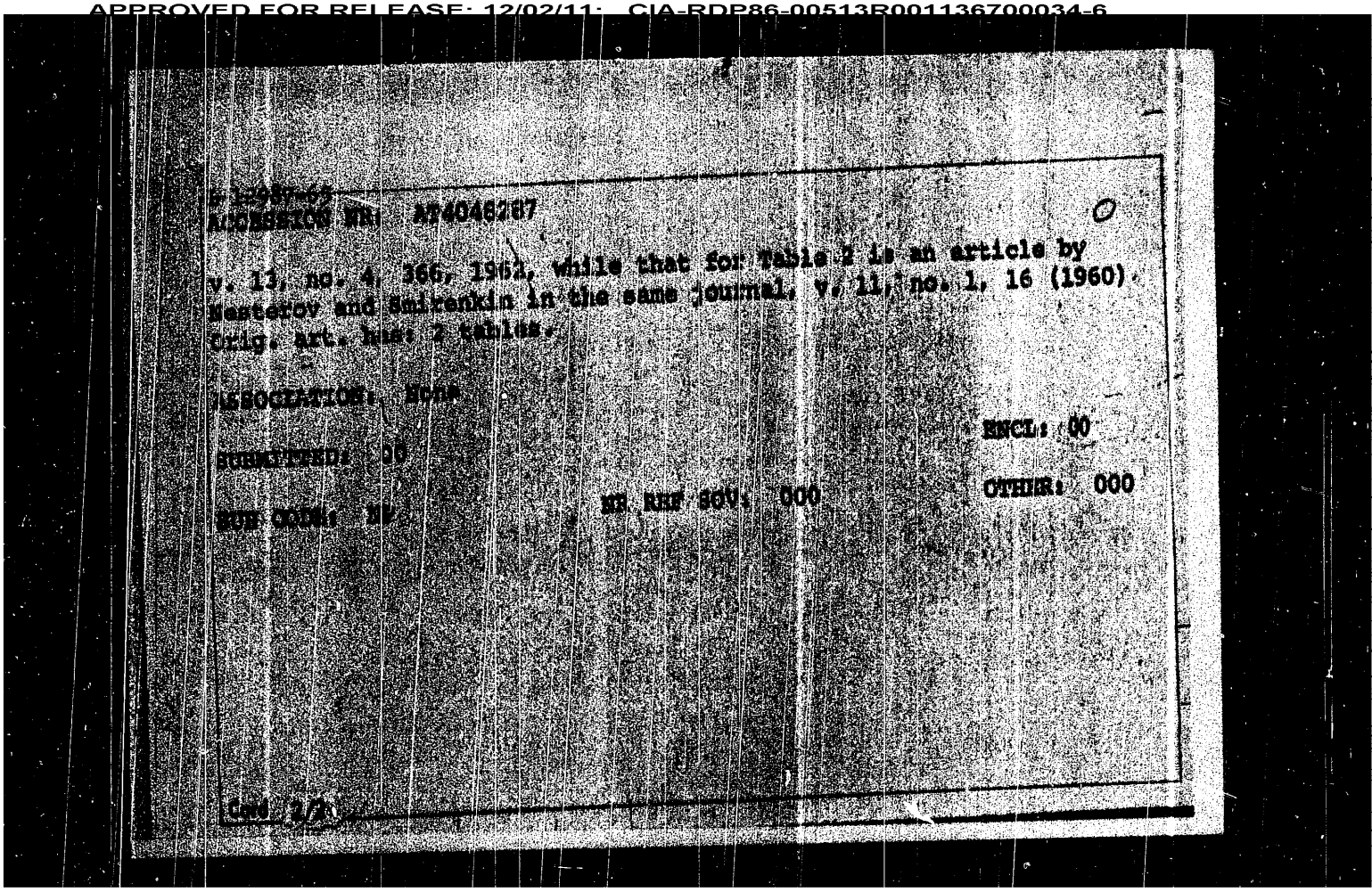
Investigating the desorption of butyl xanthate from pyrite by waste minerals during flotation. Izv. AN Uz. SSR. Ser. tekh. nauk 9 no. 1:85-87 '65 (MIRA 19:1)

1. Submitted March 25, 1964.

SMIRENKIN, G. N.; NESTEROV, D. G.; BONDARENKO, I. I.

"Fission neutron cross sections U-233, U-235, and Pu-239 in the interval of neutron energy 0,3 -2,5 MEV and Pu-240 in the interval of neutron energy 0,04 - 4,0 MEV."

report submitted for IAEA Intl Nuclear Data Sci Working Group Mtg, Vienna, 9-13 Nov 64.



L 1-65-EWT(m)-2
ACCESSION NR: AT4046267

v. 11, no. 4, 366, 1961, while that for Table 2 is an article by Mesterov and Smirenkin in the same journal, v. 11, no. 1, 16 (1960).
Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00

SUB CODE: NP NR REF SOV: 000 OTHER: 000

Card 2/2

L 12947-65 EWT(m) DIAAP MLK

ACCESSION NR: AT4048497 S/0000/64/000/000/0001/0004

AUTHORS: Smirenkin, G. N.; Nesterov, V. G.; Bondarenko, I. I.

TITLE: Fission cross sections of U-233, U-235, and Pu-239 in the neutron energy interval 0.3--2.5 MeV and of Pu-240 in the neutron energy interval 0.04--4.0 MeV

SOURCE: Secheniya deleniya U 233, U 235, Pu 239 v intervale energiy neytronov 0.3--2.5 MeV i pu 240 v intervale energiy neytronov 0.04--4.0 MeV *

TOPIC TAGS: nuclear fission, fission cross section, uranium, plutonium, fission neutron, neutron energy

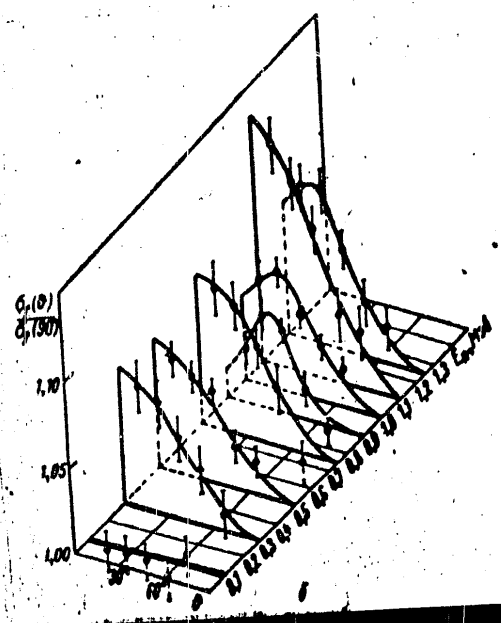
ABSTRACT: The fission cross sections are listed in two tables: 1. For U^{233}, U^{235}, and Pu^{239} in the neutron energy interval 0.3--2.5 MeV. 2. For Pu^{240} in the interval 0.04--4.0 MeV. The reference for Table 1 is an article by all three authors in Atomnaya energiya

Card 1/2 * [No source given]

ACCESSION NR: AP4041451

ENCLOSURE: 02

Energy dependence of angular distribution of fragments following fission of Pu-239

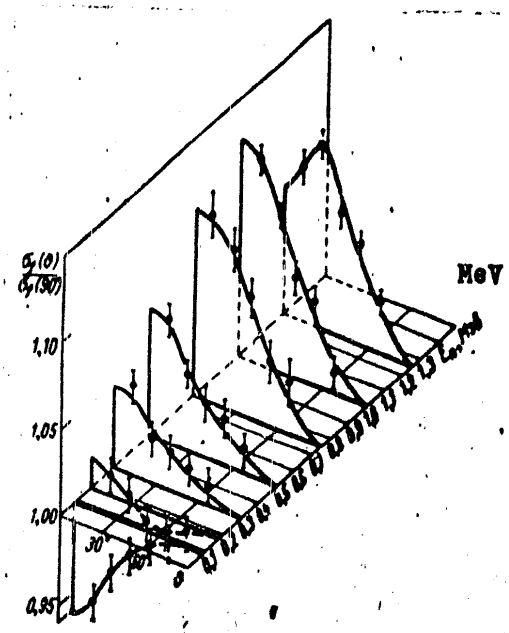


Card 5/5

ACCESSION NR: AP4041451

ENCLOSURE: 01

Energy depandence of angular distribution of fragments following fission of U-235



Card 4/5

ACCESSION NR: AP4041451

can be interpreted from a single point of view. Orig. art. has: 2 figures.

ASSOCIATION: None

SUBMITTED: 19Aug63 : ENCL: 02

SUB CODE: NP NR REF SOV: 010 OTHER: 007

Card 3/5

ACCESSION NR: AP4041451

the recording apparatus. The fragment detector is described. The measurements were made with a Van de Graaff accelerator with solid tritium target, calibrated against fast neutrons from the T(p, n) reaction subsequently moderated in paraffin. The fragment detector was made up of six ionization chambers with annular geometry to cover the entire angle range from 0 to 2π. The results are presented in the form of a two-dimensional dependence of the fragment angular distribution on the neutron energy, and agree with the results obtained in earlier measurement by the authors (Atomnaya energiya v. 11, 248, 1961) and by others, except in the range 0.2--0.5 MeV for U^{235}, where the earlier results were somewhat too high. In the case of U^{235}, a remarkable feature of the experiment results was the smooth transition from preferred fragment emission at 90° to preferred forward peaking at 0.08--0.3 MeV neutron energy, but a careful check of the experiment confirmed this result. In the case of Pu^{239} a region of negative anisotropy appears at neutron energies 0.9--1.1 MeV. It is shown that the results for both nuclei

Card 2/5

ACCESSION NR: AP4041451 S/0089/64/016/006/0519/0521

AUTHORS: Nesterov, V. G.; Blyumkina, Yu. A.; Kamayeva, L. A.; Smirenkin, G. N.

TITLE: Angular distributions of fragments in the fission of U-235 and Ph-239 by 0.08--1.25 MeV neutrons

SOURCE: Atomnaya energiya, v. 16, no. 6, 1964, 519-521

TOPIC TAGS: uranium, plutonium, fission product, even even nucleus, tritium, Van de Graaff accelerator, ionization chamber

ABSTRACT: The distributions were investigated because they can be successfully correlated with the lower-level spectra of the resultant even-even compound nuclei, which have a simple and well-studied structure. In view of the smallness of the measured effect, which is about one-fifth to one-tenth that for even-even target nuclei, special pains were taken to increase the statistics and to stabilize

Card 1/5

BONDARENKO, I. I.; KUZNETSOV, V. F.; NESTEROV, V. G.; PAVLINCHUK, V. A.; PROKHOROVA, L. I.; RABOTNOV, N. S.; SMIRENKIN, G. N.; USACHEV, L. N., Obninsk

"Effects of energy gap in channel spectrum on the fission process."

report submitted for Intl Conf on Low & Medium Energies Nuclear Physics, Paris, 2-6 Jul 64.

L 9105-65

ACCESSION NR: AP4048278

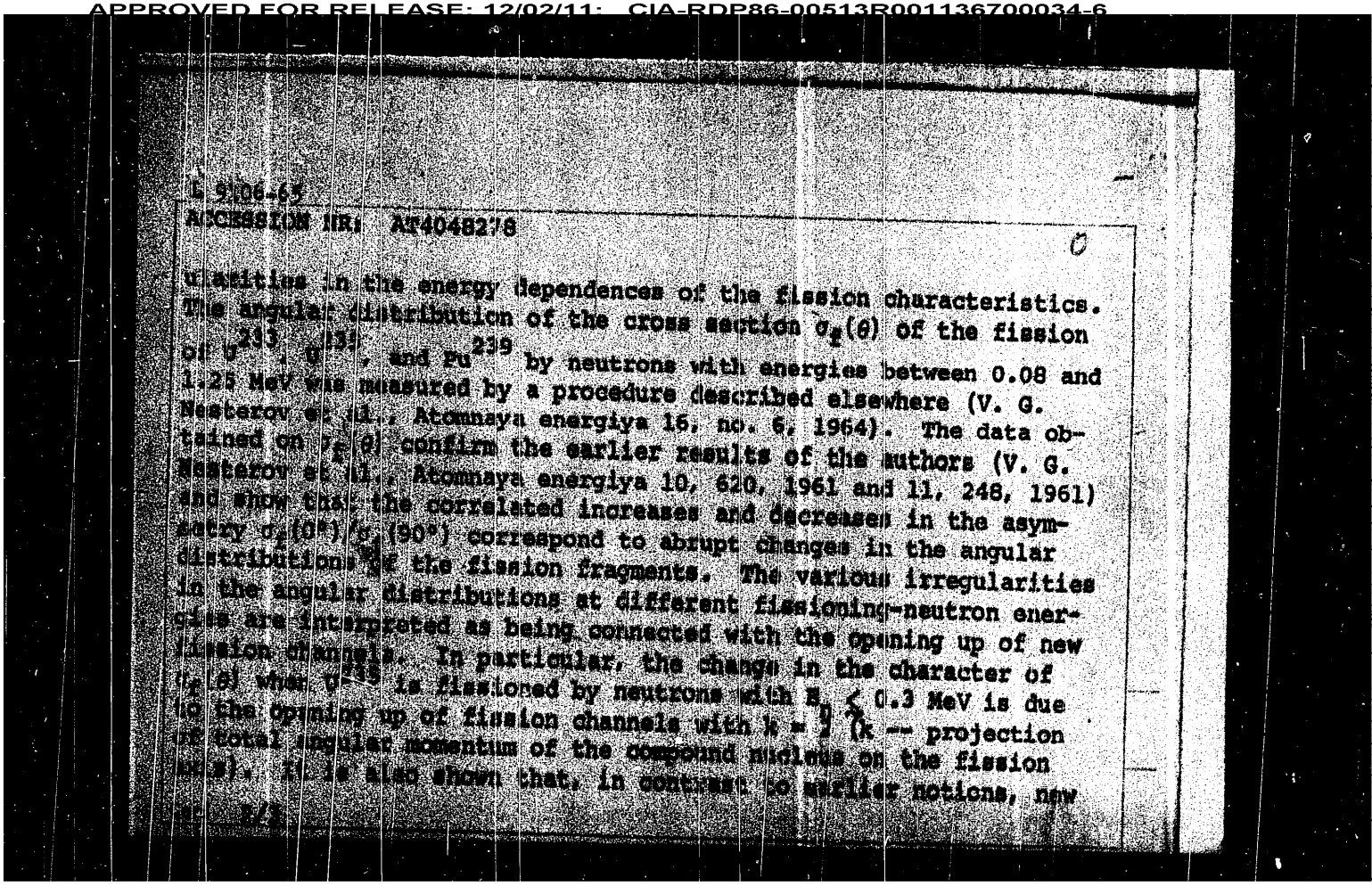
fission channels can open up at energies up to the excitation energy at the saddle point (E* = 2.5 MeV), where the energy gap of even-even nuclei is noticeable larger (~2.7 MeV) than in the equilibrium state. The presence of an energy gap in the level spectrum of the transition nucleus U^{236} can likewise explain the observed decrease in the number of secondary fission neutrons near 2.2 MeV. Other experimental data are interpreted in light of these results. Orig. art. has: 3 figures.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00

SUB CODE: NP NR REF SOV: 004 OTHER: 007

Card 2/2



L 9106-65
ACCESSION NR: AT4048278

0

u actions in the energy dependences of the fission characteristics. The angular distribution of the cross section $\sigma_f(\theta)$ of the fission of U^{233}, U^{235}, and Pu^{239} by neutrons with energies between 0.08 and 1.25 MeV was measured by a procedure described elsewhere (V. G. Nesterov et al., Atomnaya energiya 16, no. 6, 1964). The data obtained on $\sigma_f(\theta)$ confirm the earlier results of the authors (V. G. Nesterov et al., Atomnaya energiya 10, 620, 1961 and 11, 248, 1961) and show that the correlated increases and decreases in the asymmetry $\sigma_f(0°)/\sigma_f(90°)$ correspond to abrupt changes in the angular distributions of the fission fragments. The various irregularities in the angular distributions at different fissioning-neutron energies are interpreted as being connected with the opening up of new fission channels. In particular, the change in the character of $\sigma_f(\theta)$ when U^{235} is fissioned by neutrons with $E_n \leq 0.3$ MeV is due to the opening up of fission channels with $k = \frac{1}{2}\hbar$ (k -- projection of total angular momentum of the compound nucleus on the fission axis). It is also shown that, in contrast to earlier notions, new

Cr Sov/

L 9106-65 EWT(m)/AFWL/RAEM(t)/SSD
ACCESSION NR: AT4048278 S/0000/64/000/000/0001/0004

AUTHORS: Bondarenko, I. I.; Kuznetsov, V. F.; Nesterov, V. G.; Pavlinchuk, V. A.; Prokhorova, L. I.; Rabotnov, N. S.; Smirenkin, G. N.; Usachev, L. N. B

TITLE: Effect of the energy gap in the channel spectrum on the fission process

SOURCE: Vliyaniye energeticheskoy shcheli v spektre kanalov na protsess deleniya, 1964, 01-04 *

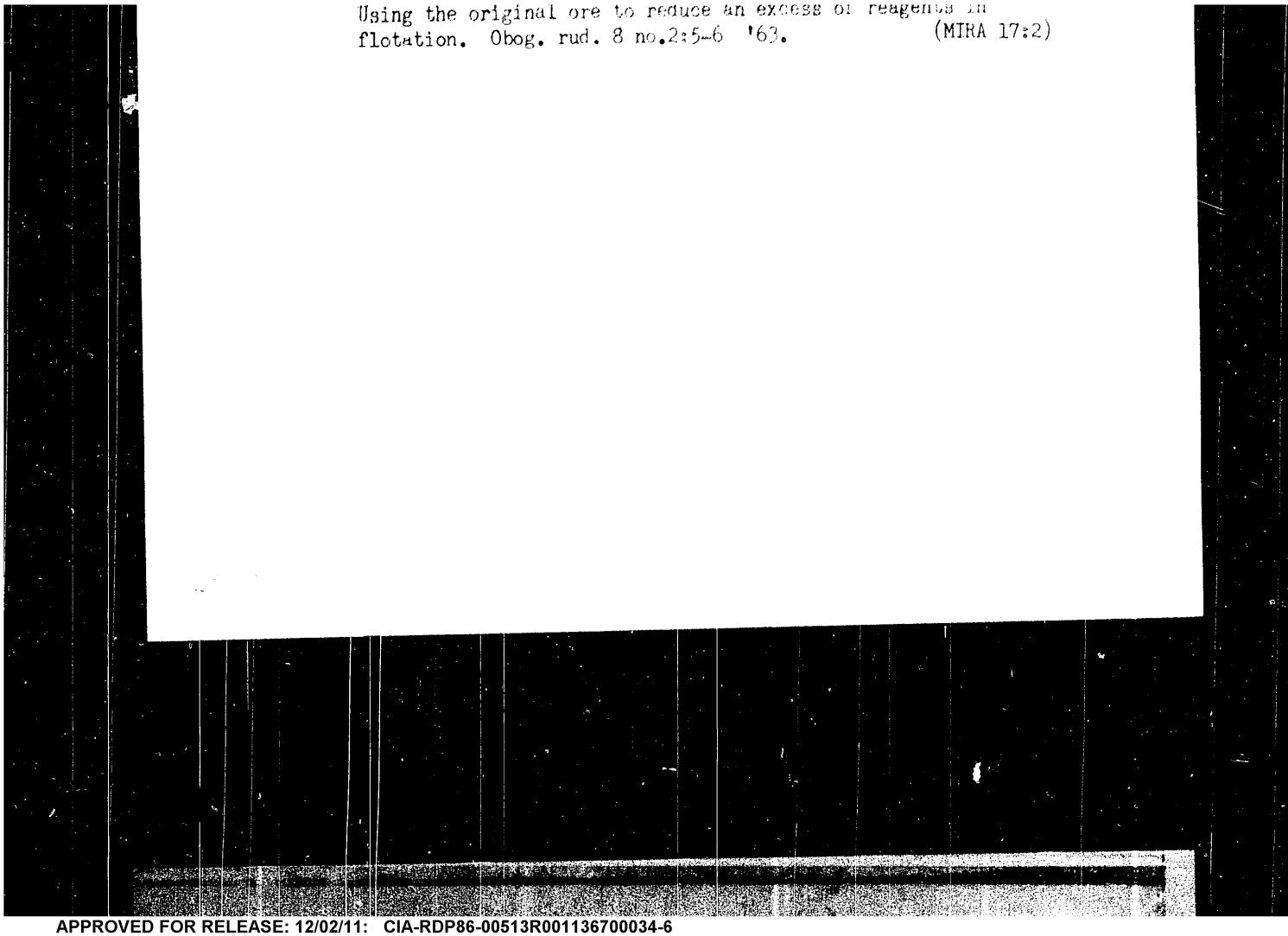
TOPIC TAGS: nuclear fission, fission cross section, fission product, fission neutron, angular distribution, uranium, plutonium

ABSTRACT: The experiments reported constitute a later stage of a study of the fission process (Yu. A. Blyumkina et al., Atomnaya energiya, v. 15, 64, 450, 1963), and are intended to clarify further the nature of the previously observed correlation between the irreg-

Card 1/3 [no source given]

APPROVED FOR RELEASE: 12/02/11: CIA-RDP86-00513R001136700034-6

Using the original ore to reduce an excess of reagents in flotation. Obog. rud. 8 no.2:5-6 '63. (MIRA 17:2)



L 14932-63
ACCESSION NR: AP3003980

6

duced with an electrostatic generator. The correlation between E_n and a.n.p.n. is presented in three figures. The results are discussed. "The authors express their deep appreciation to A. I. Leypunskiy for attention and constant interest to work, to L. N. Usachev and V. N. Andreyev for fruitful discussion of experimental results, and gratitude to V. I. Bol'shov, L. D. Gordeyeva, and L. I. Prokhorova for help with the work and participation in various stages of measurements." Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 04Aug62 DATE ACQ: 08Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 007

Card 2/2

L 14932-63 EPF(n)-2/EWT(m)/BDS AFFTC/ASD/SSD Pu-4 DM

ACCESSION NR: AP3001980 S/0089/63/015/001/0064/0066

AUTHORS: Blyumkina, Yu. A.; Bondarenko, I. I.; Kuznetsov, V. F.; Nesterov, V. G.; Okolovich, V. N.; Smirenkin, G. N.

TITLE: Number of prompt neutrons and kinetic energy of fragments in low-energy fission of U sup 235

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 64-66

TOPIC TAGS: prompt neutron, U sup 235, kinetic energy of fission fragment, Fowler hypothesis

ABSTRACT: According to Fowler's hypothesis, the kinetic energy of the fission fragment does not depend on the excitation energy of the splitting atom, from which it follows that the average number of prompt neutrons (a.n.p.n.) is increasing linearly with the increase of the energy E_n of neutrons producing fission. For large E_n, this approximately valid, but may not be correct for low E_n. The present work was conducted in order to investigate the lower E_n range in greater detail. The data sought are important practically, and may help to clarify the nature of the fission channels and the mechanism which produces the distribution of the observed energy. U_{235} was used as target; the reaction T(p, Alpha) was pro-

Card 1/2

SMIRENKIN, G.N.; NESTEROV, V.G.; BONDARENKO, I.I.

Fission cross sections for U^{233}, U^{235}, and Pu^{239} in the energy range of 0.3-2.5 Mev. neutrons. Atom. energ. 13 no.4:366-368 O '62. (MIRA 15:9)

(Uranium---Isotopes) (Plutonium) (Nuclear fission)

NESTEROV, V.G.; SMIRENKIN, G.N.; BONDARENKO, I.I.

Angular anisotropy of the fission of even-even nuclei. Atom. energ. 11 no.3:248-250 S '61. (MIRA 14:9)

(Nuclear fission)

NESTEROV, V.G.; SMIRENKIN, G.N.; BONDARENKO, I.I.

Anisotropy of the fission fragments of Pu^{240} and Pu^{239} nuclei.
Atom.energ. 10 no.6:620-622 Je '61. (MIRA 14:6)
(Plutonium—Isotopes) (Nuclear fission)

24.6600

S/089/60/009/01/03/011
B014/B070 82281

AUTHORS: Nesterov, V. G., Smirenkin, G. N.

TITLE: Fission Cross Section of Pu^{240} for Neutrons of the Energy Range 0.04 to 4.0 Mev

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 1, pp. 16 - 20

TEXT: A layer of 4 mg of Pu^{239} containing 1.80 ± 0.05% of Pu^{240} (thickness ~0.2 mg/cm^2) is built in a double fission chamber, and is irradiated with monochromatic neutrons. The T (p,n) He^3 reaction is used as the neutron source for which protons are accelerated by a 5-Mev van de Graaff accelerator. The fission chamber was filled with 93% of argon and 7% of carbon dioxide. The pressure in the chamber was 120 torr. A broad-band amplifier connected the fission chamber and the counter. The ratio between the fission cross sections of Pu^{239} and Pu^{240} was measured as a function of neutron energy, and the fission cross section of Pu^{240} was determined from it analytically. The results are represented graphically (Figs. 3 and 4). The average cross section for E_n = 1 to 4 Mev

Card 1/2

Some Characteristics of the Spontaneous Fission of U^{238}

plained on the basis of a scheme (Fig 2). By denoting the ratio $(\bar{\nu}^2 - \bar{\nu})/\bar{\nu} = \delta$, $\delta_U/\delta_{Pu} = 1.085 \pm 0.02$. $\Delta_U = 0.95 \pm 0.05$ was obtained. By means of these data the number Q of the neutrons emitted within the time unit per g uranium was calculated as amounting to $Q = (64.5 \pm 2)$ neutrons/g.sec according to three different methods which are briefly explained. The average lifetime of the neutrons was determined as amounting to $\tau = 1.44.10^{-4}$ sec; $\eta = 0.82 \pm 0.02$ ($\eta \approx 1 - e^{-T/\tau}$) at $T = 2.38.10^{-4}$ sec (duration of pulse); $\lambda = Q/\bar{\nu} = (31 \pm 1.5)$ fissions/g.h and half-life $T_{1/2} = (6.5 \pm 0.3).10^{15}$a. In conclusion, the results are discussed and compared with those obtained by other authors (Table 1,2). The authors finally thank Professor A. I. Leypunskiy for his interest, and I. I. Bondarenko and V. S. Stavinskiy for discussions. There are 2 figures, 2 tables, and 15 references, 5 of which are Soviet.

SUBMITTED: March 25, 1959

Some Characteristics of the Spontaneous Fission of U^{238}

upon a platinum foil. In the case of the uranium experiment, the chamber was filled with argon (5 atm), and in the case of plutonium with 90% Ar + 10% CO_2 (35 mm Hg). The fission chamber was surrounded by 24 proportional counters connected [illegible] ($B^{10}F_3$ in paraffin); an electronic apparatus recorded the signals of chamber, counters, and coincidence circuit. The latter had a resolving power of $\sim 6.10^{-4}$ sec. Random coincidences made a contribution of $< 0.2\%$ (Pu) and ~ 0.01 (U), respectively, and could therefore be neglected. A total of ~ 2400 coincidences was recorded in the case of U^{238} and ~ 12000 in the case of Pu^{240}. Three series of measurements were carried out; the following was obtained: $\bar{\nu}(U^{238})/\bar{\nu}(Pu^{240}) = (2.1 \pm 0.1)/(2.26 \pm 0.05) = 0.92 \pm 0.05$. In the following the measurement of Δ was discussed.

$\Delta = (\bar{\nu}^2 - \bar{\nu})/\bar{\nu} = 1 - 1/\nu_m$ holds, where ν_m denotes the largest possible number of emitted neutrons. The method is briefly ex-

Card 2/3

NESTEROV, V. G.

21(7) SOV/56-37-2-12/56

AUTHORS: Kuz'minov, B. D., Kutsayeva, L. S., Nesterov, V. G., Prokhorova, L. I., Smirenkin, G. P.

TITLE: Some Characteristics of the Spontaneous Fission of U^{238}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959, Vol 37, Nr 2(8), pp 406-412 (USSR)

ABSTRACT: The average number of neutrons emitted by excited fragments per decay event $\bar{\nu}$ has already been experimentally and theoretically determined. It was found that with the excitation energy E_x of the fragments $\bar{\nu}$ grows nearly linearly. In the introduction some previous papers are discussed, as well as the theoretical fundamentals of a calculation of $\bar{\nu}$. For the determination of $\bar{\nu}$ the authors employed the method of measuring the double coincidence of the prompt neutrons and of the spontaneous fissions of U^{238} and Pu^{240}. As detector of the spontaneous fission of U^{238} two multi-layer ionization chambers connected in parallel were used (Fig 1). 12 g U^{238} + U^{235} was applied in 2 mg/cm^2 thick on both sides of an aluminum foil and Pu (92% Pu^{240} + 8% Pu^{239})

Card 1/3

The Cross Section of the Fission of Pu^{240} by Fast Neutrons

than 2 MeV were produced by the reaction $T(p,n)He^3$, the neutrons with energies from 2 to 4 MeV by the reaction $D(d,n)He^3$, and 15 MeV neutrons - by the reaction $T(d,n)He^4$. The first reaction was accomplished by means of a Van de Graafe generator, the two others - by means of a cascade generator. The fissions in both halves of the chamber were counted for fast and also for thermal neutrons. The thermal neutrons were obtained by slowing down fast neutrons in a paraffin slug.

The cross section of the fission of Pu^{240} was used for the determination of the absolute value of the fission cross section of Pu^{240}. This cross section (in the plateau) amounts to $1,50 \pm 0,15$ barn and agrees with the results obtained by Dorofeyev and Dobrynin. For 15 MeV neutrons the fission cross section of Pu^{240} amounts to $2,6 \pm 0,2$ barn. The authors thank Professor A. I. Leypunskiy and I. I. Bondarenko for their interest in this paper and for useful comments. There are 1 figure and 2 references, 2 of which are Soviet.

SUBMITTED: May 10, 1958

21(7) SOV/56-35-2-44/60

AUTHORS: Nesterov, V. G., Smirenkin, G. N.

TITLE: The Cross Section of the Fission of Pu^{240} by Fast Neutrons (Secheniye deleniya Pu^{240} bystrymi neytronami)

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1958, Vol 35, Nr 2(8), pp 532-533 (USSR)

ABSTRACT: This paper measures the cross section of the fission of Pu^{240} with respect to the cross section of the fission of Pu^{239} by means of a double ionization chamber. Layers of Pu^{240} (2,5 mg) and Pu^{239} (4 mg) with a diameter of 5 cm were fastened to a common high-tension electrode, and therefore they were located in the same neutron flow. The collecting electrodes had the shape of hemispheres with a diameter of 14 cm. This apparatus permitted exact separation of the fission fragments from the α-particles. The authors give the numerical values for the admixtures contained in the layers of Pu^{239} and Pu^{240}. The fast neutrons with energies lower

Card 1/2

L 05040-67
ACC NR: AR6015951

per unit area; a_{ij} are the coefficients of consumption of the resources per individual; i is the number of restrictions; j is the number of competing organisms; and c_j is the viability of the species, varieties, strains, etc. For combined biologic and economic analysis, a system of equations is formulated, and the problem consists in finding a particular solution that maximizes or minimizes a linear function of a definite type. Bibliography of 4 citations. V. Chtetsov [Translation of abstract]

SUB CODE: 06, 12

Card 3/3

of generations of phylogenesis and a given ontogenesis:

$$B = K_1\left\{\int_{T_1}^{} o_1\, dt\right\} + K_2\left\{\int_{T_2}^{} o_2\, dt\right\} + \ldots K_n\left\{\int_{T_n}^{} o_n\, dt\right\} + K_{n+1}\left\{\int_{T_{n+1}}^{} o_{n+1}\, dt\right\},$$

where $o_1, \ldots, o_{n+1}$ are factors of the medium that increase or decrease the level of the reloconstants; o' the retroactive conditions of life; K the symbol for the operator for generations, stages, and periods; and $T_1, \ldots, T_{n+1}$ are the domains of integration. Each system continuously loses and recreates structural elements according to the equation $\dot{n} = \frac{dN}{dr} = K\frac{N}{r}; N = \int n dr = \frac{nr}{K}$, where n is a quantum of loss and simultaneous generation of structural elements in the system; N is their total number; r is the dimension index; and K is the constant of existence. These equations describe the internal dynamics of the system. A generalized mathematicl model of the process can be represented by a system of restrictions

$$\sum_{j=1}^{n} a_{ij} x_j < b_j;\ (i = 1,2, \ldots, m;\ j = 1,2, \ldots, n).$$

Optimization proceeds according to the viability of the organisms and is represented by the functional

$$\sum_{j=1}^{n} a_j x_j \to \max,$$

where b_j are the resources of solar radiation, water, nitrogen, phosphorous, K, Ca, Fe, Mn, etc of the elements of the consumer per unit area; x_j is the number of individuals

L 05040-67
ACC NR: AR6015951 SOURCE CODE: UR/0299/65/000/023/A007/A007

AUTHOR: Nesterov, V. G.

TITLE: A system of equations for optimization of the growth processes of plants and animals

SOURCE: Ref. zh. Biologiya, Abs. 23A51

REF SOURCE: Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, vyp. 103, 1965, 507-513

TOPIC TAGS: cybernetics, mathematic model, biologic ecology, solar radiation, nitrogen, plant growth, optimal control

ABSTRACT: Possible mathematical forms of living systems and systematic methods of formulating the necessary equations as applied to the problem of optimization of the growth processes of plants and animals are examined. As objects of cybernetic study, living systems can be represented by means of the expression $\overline{B}=y_1(p)[\overline{\sigma}+\overline{f}]$, where $\overline{B}$ is the index at the output; $y_1(p)$ the transfer function of the direct circuit; $\overline{\sigma}(t)$ the input index or signal; and $f(t)$ the feedback signal. An expression that characterizes a living system as robot is also calculated, where $B(t)$ is the body temperature; and $\overline{\sigma}(t)$ the ambient temperature. By integrating the state of the medium with respect to time and converting with definite operators and also taking into account that the medium and the organism change discretely and are represented historically by a number

Card 1/3 UDC: 578.087.1

NESTEROV, V.G., doktor sel'skokhoz. nauk

Maps and the calculation of the productivity of forests of the future. Izv. TSKHA no.4:166-184 '65.

(MIRA 18:11)

1. Kafedra lesovodstva Moskovskoy sel'skokhozyaystvennoy ordena Lenina akademii imeni Timiryazeva. Submitted April 30, 1965.

NESTEROV, V.G., prof., red.

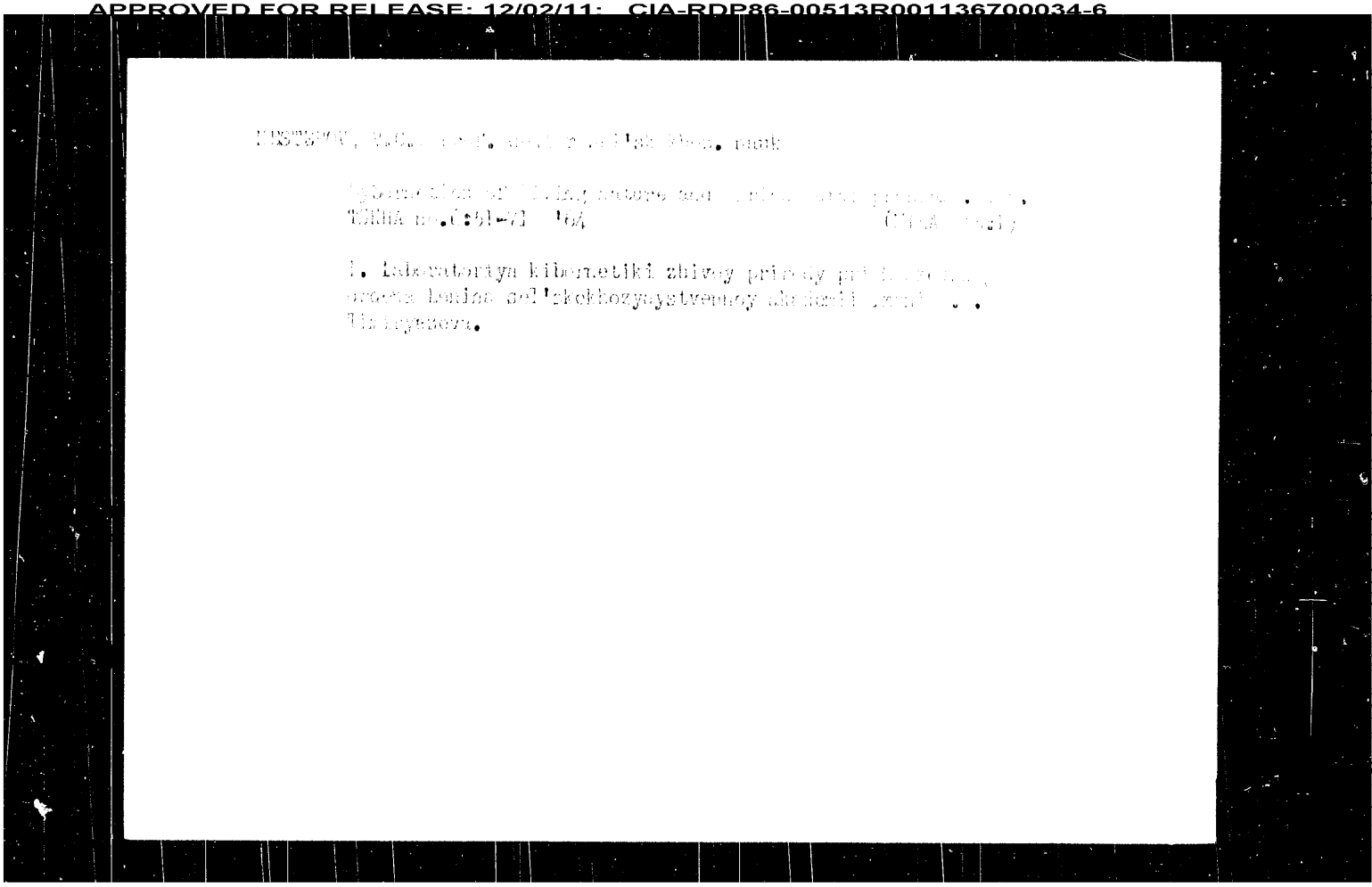
[Forests and the longevity of man, materials] Les i dolgoletie cheloveka [materialy]. Moskva, Lesnaia promyshlennost', 1964. 83 p. (MIRA 17:11)

1. Soveshchaniye po probleme uvelicheniya prodolzhitel'nosti zhizni cheloveka, Moscow, 1962. 2. Predsedatel' organizatorskogo komiteta po uvelicheniyu prodolzhitel'nosti zhizni cheloveka pri pomoshchi lechebnykh i landshaftno-esteticheskikh lesonasazhdeniy TSentral'nogo pravleniya Nauchno-tekhnicheskogo obshchestva lesnoy promyshlennosti i lesnogo khozyaystva.

NESTEROV V.G.; NIKITIN, D.E., nauchn. red.; IVANOV, Ye.S., red.

[Biological system of measures for increasing the productivity of forests] Biologicheskaia sistema povysheniia produktivnosti lesov. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovanii po lesnoi, tselliulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoziaistvu, 1964. 37 p. (MIRA 17:9)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Nesterov).



NESTEROV, V., prof.

Cybernetics and the forest. Znan.sila 37 no.3:20-21 Mr '62.
(MIRA 15:4)

(Cybernetics) (Biological research)

NESTEROV, V.G., doktor sel'skokhz.nauk, prof.

Automatism in live nature and plant moisture from the viewpoind of cybernetics. Izv.TSKHA no.4:34-52 '62. (MIRA 15:12)
(Cybernetics) (Plant physiology)

Papers submitted for the 10th Pacfic Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

MAGIBINA, M. S., Institute of Geology - "Mesozoic depressions and troughs of east Asiatic type and their position in the systematics of tectonic forms" (Section VII.C)

NEIZPO, B. A., Moscow State University, Physical Faculty - "The gamma-ray spectrometric measurements of artificial radioactivity in upper layers of the ocean" (Section VII.B.5)

NESTEROV, V. G., Chair of Forestry, The Agricultural Academy imeni K. A. Timiryazev - "Forest fire research and methods of fire control" (Section V.B)

OSTROUMOVA, T. A., Institute of Oceanology - "Biogeographical and morphological analysis of reproduction and development of flatfish in the seas of the northwest Pacific" (Section [illegible])

OZMIDOV, R. V., Institute of Oceanology - "Investigation of the horizontal turbulent exchange in the Pacific Ocean" (Section [illegible])

PARIN, N. V., Institute of Oceanology - "Regularities in the geographical distribution of flying fishes in the Pacific Ocean" (Section VII.C)

PERGAMENT, M. A., Institute of Geology - "Stratigraphic horizons in the cretaceous deposits of Kamchatka" (Section [illegible])

PETELIN, V. P., Institute of Oceanology - "The processes of recent sedimentation in the western part of the equatorial zone in the Pacific" (Section VII.C.1)

[illegible], B. A., Institute of Earth Physics imeni O. Yu. Schmidt - "The seismic geological conditions in the [illegible] area of the Pacific basin" (Section [illegible])

[illegible], L. A., Institute of Oceanology - [illegible] in the northern part of the Pacific" (Section [illegible])

[illegible], L. A., Institute of Geology - "The problem of the Bering land bridge from the zoological point of view" (Section [illegible])

[illegible], Yu. M., Institute of Geology - "Some specific features in the tectonics of the north part of the Pacific belt" (Section VII.C)

[illegible], Moscow State University, Physical Faculty - "A new deep-sea device for recording currents ([illegible])" (Section [illegible])

[illegible], Ye. A., Institute of Geology - "On the stability and inheritance of structural elements in the frame of the Pacific Ocean depression" (Section VII.C)

RASS, T. S., [illegible], and [illegible], Institute of Oceanology - "Geographical regularities in regard to reproduction and development of mass fishes in the northern part of the Pacific" (Section III.C)

[illegible], Institute of [illegible] - "Organic substance in bottom sediments in the [illegible] part of the Pacific" (Section [illegible])

[illegible], Ya. N., Institute of Earth Physics imeni O. Yu. Schmidt - "Relations between deep focus earthquakes in the eastern margin of Asia and large structures of the earth crust" (Section [illegible])

[illegible], A. M., Moscow State University, [illegible] Faculty - "The structure of natural zonality in east Asia" (Section [illegible])

[illegible], L. N., Moscow State University, [illegible] Chair of [illegible] (Section [illegible])

Crust - "The correlative method for [illegible] of bottom

SA[illegible], Kh. M., Institute of Oceanology - [illegible] of the Pacific and its use for lime Foraminifera in the northern part of the Pacific [illegible] the reshaping of the paleorelief" (Section [illegible])

SAMOILENKO, V. S., Institute of Oceanology - "Problems connected with the theory of formation of the temperature regime in seas and oceans" (Section VII.A)

[illegible], G. I., Institute of Oceanology - [illegible] of the Pacific Ocean in regard to [illegible] (Section [illegible])

[illegible], M. Ya., Institute of Geology - [illegible] of Kamchatka" (Section [illegible])

[illegible], A. Y., Institute of [illegible] - [illegible] and [illegible] in the [illegible] of the Pacific" (Section [illegible])

[illegible], M., Institute of Earth Physics imeni O. Yu. Schmidt - "Mechanism of [illegible]

[illegible], A. A., The Central [illegible] - [illegible] of human illness [illegible] and their [illegible] medicine" (Section [illegible])

[illegible], P. A., Institute of Permafrost Studies - [illegible] of Antarctica" (Section [illegible])

S[illegible], N. N., Institute of Oceanology - [illegible] for measuring deep currents in the ocean and [illegible] in the Pacific Ocean" (Section [illegible])

NESTEROV, Valentin Gr., Chair of Forestry, The Agricultural Academy imeni K. A. Timiryazev. Invited to give paper in Symposium on Forest Fire Research (Section V.B.3)

NESTEROV, V.G.; KONDRAT'YEV, P.S.

Nikolai Stepanovich Nesterov. Izv. TSKhA no.6:232-233 '60.
(MIRA 13:12)
(Nesterov, Nikolai Stepanovich, 1860-1926)

NESTEROV, V.G., doktor sel'skokhozyaystvennykh nauk, prof.

Understanding the unity of and contradictions in nature is the aim and method of biological research [with summary in English]. Izv. TSKhA no.5:7-18 '60. (MIRA 13:11)
(Biology)

Country : USSR
Category : Forestry. General. K

Abs Jour : RZhBiol., No 6, 1959, No 24684

Author :
Inst :
Title :

Orig Pub :

Abstract : harvest from one area is attained not by means of decreasing the standing density and by the overdensity of sowings, but by the most favorable densities for the given conditions of growth. In conclusion, the problem of the classification of trees, proposed by the author and its utilization for the increase of additional growth is examined. -- L. V. Nesmelov

Card : 6/6

Country : USSR
Category : Forestry. General. K

Abs Jour : RZhBiol., No 6, 1959, No 24684

Author :
Inst :
Title :

Orig Pub :

Abstract : the natural thinning, is affirmed. It is indicated that during natural restoration and cultivation by seeds, which had been formed in their habitat, regularity in thinning has a specific character, and plants, particularly the Lapland pine on poor swampy soils, as well as cranberry on marshy soils, bramble and passytoes on dry soils, form denser associations. It is underscored that the largest

Card : 5/6

Country : USSR
Category : Forestry. General. K

Abs Jour : RZhBiol., No 6, 1959, No 24684

Author :
Inst :
Title :

Orig Pub :

Abstract : basis of individual observations, the regularity of increased thinning intensity under more favorable soil-climatic conditions and its reduction under less favorable ones is categorically denied. A new interpretation of the self-thinning mechanism is presented and the falseness of acknowledging the pre-eminence of the interaction of individuals in associations, lying at the base of the old theory of

Card : 4/6

Country : USSR
Category : Forestry. General. K

Abs Jour : RZhBiol., No 6, 1959, No 24634

Author :
Inst :
Title :

Orig Pub :

Abstract : thoroughly analyzed; at the same time, the opinion of the categorial advantage of mixed cultivations over pure ones is repudiated, and recommendations for the selection of species for certain region of the USSR are given. In connection with the density problem of forest cultivations, the persistent theory of self-thinning of the trees is examined. On the

Card : 3/6

Country : USSR
Category : Forestry. General.

K

Abs Jour : RZhBiol., No 6, 1959, No 24684

Author :
Inst :
Title :

Orig Pub :

Abstract : traffictions, is unsound; to counterbalance it, the author puts forward a "bioecological doctrine," which, in his opinion, reveals the biological contradiction as the principal forest characteristic, presented by the author not as an association of organisms, but as a complex of plants and habitats. In this connection, the problem of the composition of the cultures was

Card : 2/6

1.

Country : USSR
Category : Forestry. General.

K

Abs Jour : RZhBiol., No 6, 1959, No 24684

Author : Nesterov, V. G.
Inst : Timiryazev Agricultural Academy.
Title : The Bioecological Study of Forests in Connection with Forestry Problems.

Orig Pub : Izv. Timiryazevsk. s.-kh. akademii, 1958, No. 4, 7-28

Abstract : The basic problems of contemporary Soviet forestry have been examined in a general outline. They demand further developemnt of a forest theory and a revision of certain of its principal conditions as laid down by G. F. Morozov and a few other prominent workers of forestry science. It is pointed out that the idea of Morozov, who conceives the forest to be a harmony and not a unit of con-

Card : 1/6

NESTEROV, V.G., prof., doktor sel'skokhozyaystvennykh nauk; MAMAYEV, S.A., kand. sel'skokhozyaystvennykh nauk

Studying the inheritance of the elements of development in trees [with summary in English]. Izv. TSKhA no.6: 6-16 '58. (MIRA 12:1)

(Trees) (Heredity)

NESTEROV, Valentin Grigor'yevich; OZEROV, V.N., red.; BALLOD, A.I., tekhn. red.

[Forestry] Lesovodstvo. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1958. 463 p. (MIRA 11:10)

(Forests and forestry)

USSR / Forestry. Biology and Typology. K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72774.

Abstract: growth even in mature stands, while type "b" decreases sharply in growth at this age. Trees of growth classes IV and V are characterized by weak growth throughout life and are considered "underdeveloped." It is indicated that the best criterion for distinction of developmental types is the diameter of the trunk, especially for growth class III. In class I, an additional category of transitional type is introduced - "ab." -- L. V. Nesmelov.

Card 2/2

USSR / Forestry. Biology and Typology. K-2

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72774.

Author : Nesterov, V. G.; Mamayev, S. A.
Inst : Moscow Agricultural Academy imeni K. A. Timiryazev.
Title : Intensity of Pine Tree Growth as an Indicator of the Process of Development.

Orig Pub: Dokl. Mosk. s.-kh. akad. im. K. A. Timiryazeva, 1957, vyp. 31, 307-312.

Abstract: In the Kurov Leskhoz of Moscow Oblast, 3 types of trees were found, characterized by different dynamics of growth, by observations of model trees in a pine forest. Trees of type "a" were distinguished by the great energy of the growth of the upper shoots in later years, in comparison with type "b." With age the difference in height growth becomes more distinct. Type "a" possesses strong height

Card 1/2

USSR/Forestry - Biology and Typology of the Forest. K.

Orig Jour : Ref Zhur - Biol., No 15, 1958, 67984

Author : Nesterov, V.G.

Inst : Moscow Agricultural Academy imeni K.A. Timiryazev

Title : On the Problem of Differentiating Forest Trees.

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1957, No 31, 273-279.

Abstract : An examination is made of the biological basis of classifying trees according to growth and development, and the necessity is noted of differentiating two types of specimens in plantations: a -- the slowly developing ones (late producing) and b -- the rapidly developing ones (early producing). This hypothesis is supported by numerous references to soviet and foreign forest specialists who have made comparative investigations of different

Card 1/2

NESTEROV, V.G., prof., doktor nauk; MAMATEV, S.A., kand. nauk; GOLOVINA, Ye.T., aspirant.

Districts of gully erosion along the left bank of the Kama above the Kuybyshev Reservoir and differentiation between protective measures. Dokl. TSKhA no.29:320-324 '57. (MIRA 11:8)
(Kama Valley--Erosion)

Country : USSR
Category: Forestry. Forest Management.

Abs Jour: RZhBiol., No 11, 1958, No 48731

tations, and gives mensuration characteristics for the latter. The article also notes the absence of differentiation in forest management methods with regard to the forest types, a classification of which is also lacking. General tables showing the rate of growth (cited in the article) of the principal Korean species (the thick-blossoming pine) are presented. The methods of maintenance cuttings in Korean forestry are similar to the European, but the formation of canopies (vertical) of different shapes is not used. In all the variants of maintenance cuttings only the horizontal canopy density is controlled, which is inefficient in com-

Card : 2/3

Country : USSR
Category: Forestry. Forest Management.

Abs Jour: RZhBiol., No 11, 1958, No 48731

Author : Nesterov, V.G.
Inst : Moscow Forest Technology Academy
Title : Forests and Forests Management in Korea

Orig Pub: Nauchn. tr. Mosk. lesotekhn. in-ta, 1957, vyp. 5, 145-178

Abstract: The entire forest area of Korea comprises 16.3 million hectares or 7[illegible]% of its territory. As the result of predatory exploitation, the timber reserves have been greatly reduced. Because of the variegated climatic conditions in Korea, a zonality is observed in the distribution of woody species. The article describes soils (6 types) occupied by the forest plan-

Card : 1/3

the stages of growth and development are given. Data is also given on the character of pine bark in more or less advanced stages and on the variation of the size and the shape of trees in the forest. Finally data is given on the dependence of wood quality on the stages of growth and development of trees and on diseases of the trees in the forest depending on stage aging. New views on the dynamics of natural thinning of the forest and a brief survey of existing methods of improving the quality and efficiency of plantings by artificial thinning are discussed. Tree selection characteristics are described and thinning rates according to methods of physiological rejuvenation and liberation, based on the classification

K-3

USSR / Forestry. Forest Economy

Abs Jour: Ref Zhur-Biol., No 13, 1958, 56363

Author : Nesterov, V. G.

Inst : Moscow Forest Technical Institute

Title : On the Growth and Development of Trees

Orig Pub: Nauchn. tr. Mosk. lesotekhn. in-t, 1957, vyp.5, 3-38

Abstract: The biological principles of tree classification according to height and development are given in detail. The description of trees of subclasses "a" and "b" in various age grades and a diagram of the transition of trees from one stage of development into another are given. Materials illustrating the fruit-bearing of trees according to

Card 1/3

Country : USSR
Category: Forestry General Problems

Abs Jour: RZhBiol., N. 12, 1958, No. 53440

Growth phenomena and the development of trees based on the author's classification as contrasted with Kraft's classification. Attention is also paid to the significance of attempts made by the Chair to perfect the classification of forest types in the forest and forest-steppe zones on the basis of a study of the forest types. -- L.V Nesmelov

Card : 3/3

K

Country : USSR
Category: Forestry General Problems.

Abs Jour: RZhBiol , No 12, 1958, No 53440.

Author : Nesterov, V.G
Inst : Timiryazev Agricultural Academy
Title : Traditions and Objectives in the Field of Forestry

Orig Pub: Izv Timiryazevsk. s.-kh akad , 1957, No 4, 143-158

Abstract: This article outlines the chief stages in the development of forestry science by the Forestry Chair of Timiryazev Agricultural Academy relating to the activities of the leading figures in Russian forestry. Particularly noted are the outstanding scientific results achieved by the scientists of the Chair during the past 40 years. The article

Card : 1/3

RAKHMANOV, V.V.; kandidat geograficheskikh nauk

Influence of forests on precipitation("General forestry." V.G. Nesterov. Reviewed by V.V. Rakhmanov). Meteor.i gidrol. no.2: 61-64 Mr-Ap '55. (MLRA 8:7)
(Nesterov, V.G.) (Forest influences)

NESTEROV V.G.

KOLPIKOV, M.V.; NESTEROV, V.G., professor, retsenzent; RUDNITSKIY, I.N., retsenzent; TIMOFEYEV, V.P., redaktor; ARNOL'DOVA, K.S., redaktor; KARASIK, N.P., tekhnicheskiy redaktor

[Forestry and dendrology] Lesovodstvo s dendrologiei. Izd. 3., dop. i perer. Moskva, Goslesbumizdat, 1954. 495 p. (MLRA 7:10)
(Trees) (Forests and forestry)

NESTEROV, V. G.

YARILOV, P.Ya.

Problems of reforestation under conditions of mechanized lumbering. ("Optimal dimensions of felling areas under conditions of mechanized lumbering." [laureat Stalinskoy premii, doktor sel'skokhozyaystvennykh nauk] V.G.Nesterov. Reviewed by P.IA.IArilov). Les.prom. 14 no.6:32 Je '54. (MLRA 7:6)

(Nesterov, V.G.) (Forests and forestry)

1953, 63 p.

NESTEROV, V. G.

"Features of originality in Russian forest cultivation," Razvitiye rus. lesovodstva, Issue 1, 1948, pp. 7-31 - Bibliog: 72 items

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

1. NESTEROV, V.G., PROF.

2. USSR (600)

4. Forests and Forestry

7. Soviet forestry. Les i step'. 14 no. 11, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

1. NESTEROV, V.G. Prof.

2. USSR (600)

4. Forest Management

7. New methods for improving quality and productivity of forests. Les. khoz., 5 no. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

NESTEROV, V.F.; TRET'YAKOVA, L.I., kand. tekhn. nauk

Improvement of hauling operations in the garment cutting department. V.F. Nesterov, L.I. Tret'iakova. Leh. prom. no.2: 47-49 Ap-Je '64

DATSKEVICH, M.F.; POTEKHIN, S.S.; ZIMIN, F.F.; POPOV, I.Ye.; RUSIN, P.N.; ANOKHIN, S.D.; NESTEROV, V.F.; FROLOV, V.A.; GRYAZNOV, V.A., red.; USTIYANTS, V.A.; KAPRALOVA, A.A., tekhn.red.

[Modernizing punched card calculating machines] Opyt modernizatsii schetno-perforatsionnykh mashin. Moskva, Gos. stat. izd-vo, 1957. 75 p. (MIRA 11:4)

1. Russia (1923- U.S.S.R.) Upravleniye "Soyuzmashuchet."
(Punched card systems)
(Calculating machines)

L 1262-66 EWT(m)/EWP(z)/EWP(b)/EWA(d)/EWP(t) IJP(c) JD/HW/JG
ACCESSION NR: AP5024368 UR/0286/65/000/015/0038/0038
669.15-194.3

AUTHOR: Kossovich, G. A.; Nesterov, V. D.

TITLE: High-speed steel. Class 18, No. 173255

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 38

TOPIC TAGS: alloy steel, high speed steel

ABSTRACT: This Author's Certificate introduces a high-speed steel which contains chromium, tungsten, molybdenum, vanadium and cobalt. The mechanical and technological properties of the steel are improved by using the following composition (in %): carbon--0.8-0.9; chromium--3.0-3.6; tungsten--5.5-6.5; molybdenum--3.0-3.6; vanadium--2.1-2.5; cobalt--5.0-6.0; manganese--0.4; silicon--0.4; sulfur--0.03; phosphorus-0.03.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut Gosudarstvennogo komiteta po mashinostroyeniyu pri Gosplane SSSR (All-Union Scientific Research Institute of Instruments, State Committee for Machine Building, Gosplan SSSR)

SUBMITTED: 06Feb64 ENCL: 00 SUB CODE: MM
NO REF SOV: 000 OTHER: 000

Card 1/1 KC

ACC NR: AP7002602 (A) SOURCE CODE: UR/0413/66/000/ 009/0109/0109

AUTHORS: Yevdokimov, O. P.; Nesterov, V. D.; Shelkakov, N. A.

ORG: none

TITLE: A device for cooling of engines. Class 46, No. 189251

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 109

TOPIC TAGS: engine cooling system, liquid cooled engine, heat exchanger

ABSTRACT: This Author Certificate presents a device for cooling of engines (primarily internal combustion engines). The device contains a heat exchanger and circulation pipes for the cooling and the cooled liquids (see Fig. 1).

Fig. 1. 1 - casing; 2 and 3 - screw rotors

To decrease the size and simplify the construction, the heat exchanger is made of two screw rotors capable of many turns. These rotors are mounted and operate concentrically in the casing. Together with the casing they form ducts for passing the cooled and the cooling liquids in opposite directions. Orig. art. has: 1 figure.

SUB CODE: 21, 13/ SUBM DATE: 30Aug65

Card 1/1 UDC: 621.43-714

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